

*ABSTRACT*

[088] An annular heat-exchange reactor vessel allows for selectively controlled heat transfer between a first fluid and second fluid flowing through the vessel. Optionally, catalyst means may be added to further convert either fluid into a desired end product. In this regard, it is envisioned that the present invention will have particular utility in fuel processing systems. Additional, in-line upstream or downstream annular modules may also be incorporated to create a more complete, efficient and/or compact system. Various methods for constructing this reactor system are also disclosed.